volumes increase and then you get snow days when things peak and spike. But if you wanted to, say, take an average, average year round for somewhere for our own trunk groups, 65 to 70 percent.

MS. CARPINO: Do you know whether AT&T has any trunk groups that are operating at less than 60 percent today in Virginia?

MR. ALBERT: Yes.

MS. CARPINO: What about WorldCom?

MR. ALBERT: Some.

MS. CARPINO: Does any state commission permit to you terminate underutilized trunks to unilaterally terminate underutilized trunks? Do we need to make a distinction between one way and two way?

MR. ALBERT: No, I'm not aware that we've had it as an arbitrated issue in any state proceedings.

MS. CARPINO: Has it been negotiated?

MR. ALBERT: Yes, and it's probably--I don't know the time frame, it's probably within maybe about the last year that we have felt a need

to begin to try to negotiate it into our Interconnection Agreements. The very first wave of CLEC Interconnection Agreements we didn't because we hadn't had a lot of experience, and we didn't know it was going to be that big of a problem. Now with our tandem exhaust and now with the relatively strong growth of CLEC trunks we are having some legitimate problems in our network because of underutilization. We have in a number of cases tried to work with CLECs most recently to get voluntary reductions, and in some few cases we have been successful, but in others we haven't. That's why about a year, year and a half ago we felt like--you know, we tried to do it without it and we were having problems, and it didn't work. We felt the need to try to negotiate it in from a contractual perspective so we'd have that to fall back on because we were having problems.

MS. CARPINO: What mechanism is in place if a carrier such as AT&T or WorldCom disagrees with your determination that a trunk group is underutilized? Would it go through the dispute

resolution process in the Interconnection Agreement?

MR. ALBERT: Yeah, I think that would have--if you didn't have it defined as a specific standard in the agreement, then it would really--the only other avenue you would have at that point would be to try to work it through to dispute resolution, which is one reason we are after at least after trying to get a quantified, known, defined standard negotiated into the agreements, and what we used as a starting point is what we do for ourselves.

MS. CARPINO: I just want to clarify the exchange you had with Ms. Schmidt about the OBF guidelines.

Did you agree or disagree that OPF has developed procedures to address underutilized trunks?

MR. ALBERT: I disagreed.

MS. CARPINO: Okay. I just had a few questions for you on trunk forecasting.

AT&T has proposed a three to one mechanism

by which they agreed to forecast outbound traffic if it's in excess of three to one. I believe that's accurate.

And Verizon doesn't--it's not an adequate compromise or you don't agree with it. I just want a little bit more detail on why.

MR. ALBERT: Yeah. That doesn't solve the problem that we have and the need for the trunk forecast. I think I described earlier why we use the forecasts, why we benefit from them, if the CLECs can do them, and how we believe it helps us to do a better job overall for all CLECs, and particularly the trunk forecasts help us do an overall job, if we could get all carrier forecasting.

But what the forecast really does is it identifies growth, is what we are after because that--if you're going to have spiky growth, that's what's going to impact the most our putting of additional capacity into the network, and we believe that the CLECs--we believe spiky growth--and actually it is--is driven the most by

the number and the nature of the customers that the CLEC is going to sign up, and that's true for spiky growth, us calling them as well as them calling us.

MS. CARPINO: Isn't that mostly Internet driven, though, or not necessarily?

MR. ALBERT: The big bangers are, but we've also had some big bangers that weren't Internet driven, where they have been--CLECs have signed up a lot of customers, and just different types of customers and unique conditions but nevertheless when we've put them on-line, there have been significant increases in traffic as a result of that.

But the change or the growth in traffic, the occurrence of that really is independent of what the relationship of trunks is. You could be balanced and still have a CLEC doing something, where they are going to drive a spike in growth and a spike in trunks. That's the main thing that we need from the forecast is to try to get the longer term projections of when things are going to go "kabang" and when we've got to take that input for

building up capacity.

And the potential of the CLEC doing something that would drive that significant growth, from what I see, that's really just totally independent of what the current relationship is of trunks that go from them to us and us to them, which is what the three to one proposal is.

So, our need and the volatility that occurs and of the use that we make from the forecasts that reflects that volatility, that's just totally independent of, you know, if it's balanced or if it's more the other way or if it's three to one our way.

You had asked a question, too, about the New York guidelines and if they specifically did say will the CLECs forecast in both directions? And they do, but I guess it's pretty cryptic only to an engineer who knows and loves trunks the way I do.

I could point out the spots. If you go into the Cox exhibit, and it's whatever it is, I guess it's Cox Exhibit 18, but it's the second

piece of it that's labeled Bell Atlantic Telecom Industry Services, Appendix I, Part One. If you flip back to page five of that, there is an item 9 A that says Traffic Origination. This is instructions for the forecast forms that are attached at the end of the guidelines. And in the instructions here there is one code that is used, if it's a trunk group, it's labeled BA, which is code they use, if it's traffic that originates with Bell Atlantic, and then there is another code, CL, that is used that if it's traffic that originates with the CLEC. So, that's one place where you get the dual directionality, trunks to us to them and them to us.

The other place in here you bump into it, and if you thought that was subtle, this is even more so. If you go to the very, very last page, where we've got an example, we filled out there an example of when you take the different columns for the trunk forecasts, the information that we are looking for, the column that basically shows the type of signaling, you will see there is one, it's

the third row, the column that has a seven and then a minus sign. That's basically Top Secret code for SS7 outpulsing on a trunk group that carries traffic from Bell Atlantic to the CLEC; and if you look at the one just above that where it's a minus sign and then a seven, that's the SS7 signaling outpulsing code for a trunk group carrying traffic in the other direction from the CLEC to us.

So, the example here shows trunks that carry traffic from Bell Atlantic to the CLECs, and it also shows an example that carries traffic from the CLECs to us.

That's as close as you get to spelling out that this has got it in both directions. I could say the result of people using these is what we get from everybody in New York, and what we get from everybody in the other states; and what we currently get from AT&T and WorldCom in Virginia is they are both presently forecasting the trunks in both directions.

MS. FARROBA: For the traffic that's from Verizon to the CLEC, is that what the DIXC reports

are for?

MR. ALBERT: Yes.

MS. CARPINO: Just a quick question on the three to one ratio. And you may not know this, and if you don't, it's not a big deal. Recently, I guess it's maybe a month and a half ago now, the New York Commission agreed with AT&T and adopted that proposal in its arbitration order. Do you know whether Verizon has filed a motion for recon on that?

MR. ALBERT: I don't know. I believe they goofed, but I don't know--

MS. CARPINO: Is that an engineering term?

MR. ALBERT: Excuse me? Yes.

MS. CARPINO: One last question. Should the Commission order the CLECs to provide both inbound and outbound forecasts to you, would you agree to provide the same information to the CLECs? That is, your inbound and outbound forecast?

MR. ALBERT: No, because to me that's really what the issue is. The issue is who should develop and provide that forecast. So, we are

looking to the CLECs to develop the forecasts for the trunks carrying traffic in both directions. We think they are in a better position to do a better job to come up with that forecast, and then we in turn would use it. But we would not be going behind them and trying to do the same thing because really you can't do it as well as they can do it.

MS. CARPINO: Isn't it conceivable that Verizon would sign up some customer that could create a spike in traffic as well, which is an example that you gave for non-Internet bound traffic, and that it could be out of balance?

MR. ALBERT: I guess anything is theoretically possible, but I haven't seen it happen yet.

So, I haven't seen a spike in actual trunk operation causing blockage that was due to a sign of something big on our end that was driving boatloads of calls to an individual CLEC.

MS. CARPINO: Actually, I do have one last question, and then I am finished.

In Cox's testimony, I believe it was

direct, they said in order for them to provide you with forecasts, they required certain information that was fairly detailed. It's Cox Exhibit 2, the rebuttal testimony, pages 39 and 40. I don't know if you had a chance to review that; it included peg cat usage and overflow measurements, knowledge of internal network failures and/or congestion, and I won't read through the rest of it.

Is that information you are willing to share with Cox?

MR. ALBERT: Not all of that is in the DIXC data, the D-I-X-C data, which is what we've talked about with WorldCom, which is the realtime information that would come off of a machine. Basically it's pretty detailed what comes off of that data feed, but that doesn't get into flagging like what was triggered by a network failure.

Those are hard to find, in the first place, when it comes to trunk blocking. You can get conditions for maintenance purposes; either carrier can busy out trunks, trunk group. And when a carrier busy outs trunks, that basically means

that they take them out of service. And either party could do it on the end of the trunk, not something they both have to do, and that's usually done for maintenance purposes when there is trouble, when people are troubleshooting, they've got to turn down a portion of a trunk group to try to identify where a problem is.

When those fairly random maintenance activities take place, they do then reduce the size of the trunk group. They do then cause there to be a higher potential at that moment for blocking to occur.

So, you occasionally can get what looks like high usage on a trunk group that's being somewhat artificially driven by maintenance activity that either party is doing, but we don't record, capture, correlate any of that.

MS. CARPINO: To the extent you have this information listed by Dr. Collins, are you willing to share it with Cox?

MR. ALBERT: The traffic load--and I haven't read through it exactly--the traffic load

data we would share, and I'm not sure what kind of a one-for-one match we may have with what's on the DIXC data versus what he's asked for.

When it comes to major network change activities that would affect all carriers, we do have disclosure requirements, like if we are going to put a new tandem in the network, we basically notify the industry through industry letters when we know of activities of that nature. And I think it's more appropriate to have that notification of that type of a major network change done on an industry basis rather than an individual contractual commitment to doing a little bit maybe unique fashion for each individual CLEC.

But things of that nature, we do do on an industry basis.

MS. FARROBA: On the semi-annual forecasts that Verizon does, are those shared with the CLECs?

MR. ALBERT: That we do?

MS. FARROBA: Yes.

MR. ALBERT: For our own switches?

MS. FARROBA: Yes.

MR. ALBERT: No.

MS. FARROBA: So, when you get the forecast from the CLECs and make whatever adjustments you think are the reasonable adjustments on those forecasts combined with the IXCs in your own estimates, that resulting forecast doesn't get shared with anyone outside of Verizon?

MR. ALBERT: No, it doesn't.

MS. FARROBA: Okay, thanks.

RECORD REQUEST

MS. CARPINO: I'm finished. Thank you.

Before I forget, Mr. Harrington, could you provide us a paginated copy of Exhibit 18 because if we are going to cite to this, and in order it's going to be a mess.

MR. HARRINGTON: You just want to paginate from the beginning of it to the end regardless of how the--

MS. CARPINO: I don't want a thousand pages. I want you to go through and number it.

MR. HARRINGTON: That's what I'm saying. You want us to take the existing document and

paginate it one through N?

MS. CARPINO: Yes.

MR. HARRINGTON: Okay, we will do that.

MR. DYGERT: All right. At this point I think we can have the petitioner witnesses up for any cross that Verizon may have.

(Pause.)

MR. DYGERT: Gentlemen, would you please introduce yourselves, and then we could start with Verizon's cross-examination.

MR. TALBOTT: David L. Talbott, AT&T.

MR. SCHELL: John D. Schell, AT&T.

DR. COLLINS: Francis Collins on behalf of Cox.

MR. GRIECO: Don Grieco, WorldCom.

MR. DYGERT: Just as a reminder, you are all still under oath from earlier this morning, or yesterday, I guess.

CROSS-EXAMINATION

MR. EDWARDS: Good afternoon, gentleman. Seems like a lifetime ago since I last talked to you yesterday morning.

Mr. Grieco, you were in the room, I believe, when your counsel was asking Mr. Albert and Mr. D'Amico questions on trunk underutilization and forecasts.

MR. GRIECO: Yes.

MR. EDWARDS: In light of Mr. Albert's statement on the stand that Verizon is not pursuing forecast penalties, do you have an opinion on whether WorldCom would agree to delete from its proposed language its proposals that Verizon agree or disagree with its forecasts?

MR. GRIECO: I think that we don't have a problem with that, as far as I know.

MR. EDWARDS: I cut down my cross considerably in light of the last 30 minutes, so if you bear with me a minute.

And you heard, I believe, Mr. Albert's answers to your counsel's questions regarding the application of the WorldCom proposed language that would allow disconnection of underutilized trunks at a 60 percent utilization level with a 15 percent overhead and his explanation of what that meant.

Did you hear that?

MR. GRIECO: Yes.

MR. EDWARDS: Is his explanation of that accurate to best of your knowledge?

MR. GRIECO: Yes, that's my understanding as well.

MS. CARPINO: Could I ask for a point of clarification. Mr. Albert referenced some E-mail which obviously FCC staff hasn't seen, so I think it might be helpful for us if you just quickly explain what you believe and what Verizon believes this 15 percent overhead to be.

MR. GRIECO: Well, the 15 percent overhead was meant to imply that we would not--say if we were at give 55 percent utilization, they would not disconnect down to 60 percent leaving 5 percent for margin for growth. We want to make sure that no matter how much we downsize, there is a 15 percent growth margin on that trunk group. So, if you were 55 percent, you would consider going on to 60, you would go down to 70.

MS. CARPINO: Thank you. Mr. Edwards?

MR. EDWARDS: Thank you.

Dr. Collins, do you have up there what was marked as Cox Exhibit 18 that your counsel asked Mr. Albert questions about, New York State carrier-to-carrier guidelines standards, performance standards, and reports?

DR. COLLINS: I do.

MR. EDWARDS: Where do you live, Dr. Collins?

DR. COLLINS: In the Boston area.

MR. EDWARDS: That's Massachusetts talking to Virginia.

DR. COLLINS: I guess it was.

MR. EDWARDS: Could you turn to the page--it's in the appendix, one, part one, page two, page two is in the bottom right-hand corner, with the description of CLEC interconnection trunking forecast process.

DR. COLLINS: I have it.

MR. EDWARDS: Let me ask a background question. Were you involved at all regarding Cox's own forecasting process?

DR. COLLINS: I'm aware the forecasting process that Cox uses, and I have been involved in doing trunking forecasts for--in different situations and in different environments and different countries for about 40 years.

MR. EDWARDS: Am I correct that as we sit here today, Cox objects to providing outbound forecasts outbound from Verizon inbound to Cox forecasting information to Verizon?

DR. COLLINS: Yes. Cox's position is that despite its seeming acceptance in some jurisdictions and by some carriers, Cox just doesn't believe it's best practices to attempt to forecast Verizon's outbound traffic to Cox for a number of reasons. Primarily, among those reasons is that forecasting, if it's done properly, it's a very complex process that really should introduce to the process a number of different parameters, very few of which are available when you're on the receiving end of trunk group carrying traffic, even when that's augmented by the so-called DIXC information.

And what Cox, contrary to what Mr. Albert said, and answering your question gives me a chance to make a slight correction, if you don't mind, and that is, Cox does do Verizon outbound forecasting now, and we do submit it the second month of each of the first and third quarters as required. That's February and August.

MR. EDWARDS: It's required what?

DR. COLLINS: I say that is required, February and August semi-annual forecast. Cox does do that now, but does it in a process which seems to satisfy the need but from Cox's viewpoint, again, is not best practices and that is Cox takes the incoming traffic, which it sees at the end of a trunk group or collection of trunk groups from Verizon to Cox and then trends that traffic based on past growth.

So, forecasting really when it's done, if you want to put it on a piece of paper, on a rectangular coordinate chart, projects traffic as a function with time on the horizontal axis and some unit of traffic on the vertical axis. So you have

a rising curve with dips and peaks of it.

Trending that curve means that you have some significant history from which you can make a short extrapolation. If you cut 10 years' worth of traffic, and you should really do it on I a month-by-month basis because it changes from month to month, but that is February of last year and February of this year would represent a good forecast if it was trended. March of last year to March of this year may represent a good forecast than what was trended as far as the trending is concerned, and that's what Cox has been doing, submitted it, has been informed by Verizon. It is my understanding that the forecasts appear to be reasonable, appear to be relatively complete and satisfied Verizon's intention.

But what that leaves off the table in terms of Verizon's forecast is everything behind it; that is, behind Verizon's switch, which is Verizon's marketing efforts, Verizon's network planning, our redirecting trunk groups as an example, so-called, throwing trunks when a new

tandem is installed, when is it going to be installed, over what period of time will these trunks be thrown, what will that do in terms of offloading the tandem that's providing existing traffic over a trunk group to Cox.

Marketing efforts, as I may have indicated--just numbers and numbers of things that ought to take that trend as a starting point and then modify the trend. Cox knows none of that information. It can do it for itself, does do it with respect to its outbound forecast, but can't do it because it doesn't know that information from Verizon.

And having said that, then we believe it's best practice if Verizon, just as it does with other ILECs, meets together, develops mutual forecasts where they sit on their side of the table and do their forecasting, Cox sits on this side of the tail and does its forecasting, look at the relative numbers, see if they seem to make sense, and come in some mutual understanding, and that's what Cox has advocated to this date and still

advocates.

Cox's corporate position is it just does not want to be involved in doing Verizon's forecast. It doesn't think it's best engineering practice, doesn't think it's good business practice, doesn't want to be responsible for the size of Verizon's trunk groups to Cox, so that there is tremendous blockage. Cox, you see, it's all your fault. It's just beyond to us understand why it's required, and we really insist that you're better off to do your own.

MR. EDWARDS: And--

DR. COLLINS: And after listening to Mr. Albert talk today, we know a guy that knows how to do it. He's sitting right here.

MR. EDWARDS: You're referring to Mr. Albert?

DR. COLLINS: I am.

MR. EDWARDS: You don't disagree with the fact that Verizon would have the information germane to what's going on behind its own switch; correct?

DR. COLLINS: I do not disagree.

MR. EDWARDS: And you would agree that it's reasonable that Verizon would take the information it knows and combine it with the information that Cox could give it in order to make its forecast; correct?

DR. COLLINS: That Verizon could?

MR. EDWARDS: Yes.

DR. COLLINS: The information Cox could give it would be information about Verizon's traffic to Cox?

MR. EDWARDS: No, no. Suppose Verizon would not expect, and I don't think they would expect Cox to provide it information regarding the information Verizon would already have regarding the goings on, if you will, behind its own switch. But Verizon would take the information it already has, use the information Cox could provide it, and wouldn't you agree, then, make a more informed forecast with Fox's input?

DR. COLLINS: Well, the answer is yes, but let me explain in order to test whether or not the

answer has any merit.

What Cox could do is what it's doing now, and that is the only thing it could do is provide trending. Trending is best done in the long history which Verizon has and Cox doesn't have. Cox has four-year history. That's all. In the long-term forecasting business, four years is not a long time.

However, having said that, Cox could provide trends to Verizon. Equally as well, we could show you how we do it and you could do it yourself, but that's like somebody preaching to the choir. You guys know.

MR. EDWARDS: We already know what you did.

DR. COLLINS: Yeah. You know how to do that as well as we do, if not better.

MR. EDWARDS: And the information Verizon is seeking is what you're going to do; right?

DR. COLLINS: It's what you hope we do, yes.

MR. EDWARDS: In trending, if I understand

what you're telling me, trending is basically what's gone before that period of time and then extrapolated to the future based on what's happened in the past?

DR. COLLINS: That's right. By trending the traffic comes off our end of your pipe. What we don't know is if there is any blockage on your end of the pipe. We don't know what the peg count is, and that's the stuff we spoke about in the rebuttal testimony.

MR. EDWARDS: And Verizon would know that, though? I'm sorry, I didn't--

DR. COLLINS: Verizon does know that.

MR. EDWARDS: When Cox makes its forecast in its own business plans, I assume they make forecasts regarding the quantity of customers they expect in a particular area over some period of time. Would that be correct?

DR. COLLINS: Among some other things, yes, that is one component, and that is correct.

MR. EDWARDS: And in looking at those customers, does Cox also make certain projections

regarding what kind of customers they are, residential, business, ISPs, non-ISPs?

DR. COLLINS: Well, the manner of converting customer com to traffic depends on some rough order of magnitude in metrics, which is traffic generated on a per customer basis. And it's really per customer classification basis. Different kinds of customers generate different amounts of traffic. For instance, customers are different than business customers, et cetera.

So, the answer is yes. It takes into account the class of customers.

MS. CARPINO: Dr. Collins, could you speak into the microphone. We're having a very hard time hearing you.

DR. COLLINS: Yes. I was replying to that question by saying that we do take into account customer classes because each class will generate a different amount of traffic, and the ultimate realization of a customer count in terms of a forecast is to map that customer count into the forecast by using some rough order of magnitude

metrics, which is amount of traffic generated for a customer class.

MR. EDWARDS: Now, let me ask to you look at the page in Cox Exhibit 18 that I asked you to look at, CLEC interconnection trunking forecast process. Do you see that?

DR. COLLINS: I do. Yes, I do.

MR. EDWARDS: The first line under there the question is why do we need forecasts. You would agree with me that Cox does not want design blocking thresholds to be met in the Verizon trunks; correct?

DR. COLLINS: Well, without finding too much fault with the language, if we could agree on what that was supposed to mean, I would probably say, yes, we agree with it.

MR. EDWARDS: You don't want call blocking for your traffic, do you?

DR. COLLINS: Yeah, but that's not what it says. It says to ensure that trunk groups do not exceed their design blocking thresholds. Now, exceed means to have more trunks in the group than

required to meet the blocking threshold. That's good. Mr. Albert wouldn't like it because it would go above his 60 percent, and he will want to offload some of those trunks.

If what that means is that we don't want the traffic on a trunk group to exceed the blocking threshold of the trunk group, Cox says yes, we don't want that either. That's not what it says, but I think that's what it's intended to mean.

MR. EDWARDS: That's a good thing; right? You don't want blocking.

DR. COLLINS: That's a good thing. We don't want blocking.

MR. EDWARDS: Right.

And although there may be some disagreement with this, I assume you would agree at least with the concept that Verizon's capital funds for any particular year have some limit to them.

DR. COLLINS: In terms of capital budget expenditures and relationship of forecast then?

MR. EDWARDS: Yes.

DR. COLLINS: Yes, there has to be a

correspondence, and as every telephone company is, including Cox and including Verizon, you do have capital budgets within which all expenditures have to fall.

MR. EDWARDS: And you would agree that not only with capital budgets, but also with humans and other types of funds there have to be allocation of certain resources Verizon has to make with respect to network design and network deployment?

DR. COLLINS: We certainly agree that's true.

And once again, we would submit that that's one of the reasons we want best practices used in the forecasting process.

MR. EDWARDS: Do you know whether outside of the trending forecasts that you testified to that are provided twice a year to Verizon, whether on an informal basis Cox provides any type of forecasting information to Verizon?

DR. COLLINS: Well, what I know is that the two forecasts per year result in a checkoff on a checkoff sheet, so that Cox could say it made the